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# Product Information



# Fatostatin (hydrobromide)

Item No. 13562

CAS Registry No.: 298197-04-3

Formal Name: 4-[4-(4-methylphenyl)-2-thiazolyl]-2-

propyl-pyridine, hydrobromide

Synonym:

 $C_{18}H_{18}N_2S \bullet HBr$ MF:

FW: 375.3 **Purity:** ≥95%

Stability: ≥2 years at -20°C Supplied as: A crystalline solid UV/Vis.:  $\lambda_{\text{max}}$ : 257, 336 nm

## **Laboratory Procedures**

For long term storage, we suggest that fatostatin (hydrobromide) be stored as supplied at -20°C. It should be stable for at least two years.

Fatostatin (hydrobromide) is supplied as a crystalline solid. A stock solution may be made by dissolving the fatostatin (hydrobromide) in the solvent of choice. Fatostatin (hydrobromide) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of fatostatin (hydrobromide) in these solvents is approximately 0.1, 1.2, and 1 mg/ml, respectively.

Fatostatin (hydrobromide) is sparingly soluble in aqueous solutions. To enhance aqueous solubility, dilute the organic solvent solution into aqueous buffers or isotonic saline. If performing biological experiments, ensure the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. We do not recommend storing the aqueous solution for more than one day.

Sterol regulatory element binding proteins (SREBPs) are transcription factors that have pivotal roles in lipogenesis and fat metabolism. The activation of SREBPs requires escort to the Golgi by SREBP cleavage-activating protein (SCAP) followed by proteolytic release of SREBP from the Golgi.<sup>2</sup> Fatostatin is an inhibitor of SREBP activation, preventing SCAP-mediated escort of either SREBP-1 or SREBP-2 to the Golgi ( $IC_{50} = 5.6 \mu M$ ).<sup>3,4</sup> This blocks constitutive SREBP-mediated gene expression in the human prostate cancer cell line DU145.<sup>3</sup> Fatostatin prevents insulin-induced adipogenesis of 3T3-L1 cells as well as growth induced by insulin-like growth factor 1 in DU145 cells (IC<sub>50</sub> = 0.1  $\mu$ M).<sup>5</sup> Through its actions on SCAP/SREBP-1, it inhibits high glucose-induced upregulation of TGF-β in primary rat mesangial cells.<sup>6</sup> This compound also alters lipid metabolism in vivo, reducing hepatic fat accumulation in ob/ob mice.3

## References

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- 3. Kamisuki, S., Mao, Q., Abu-Elheiga, L., et al. Chem. Biol. 16, 882-892 (2009).
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